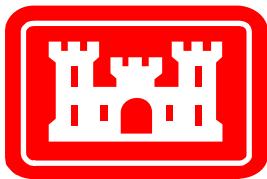


Brunswick County Beaches,  
North Carolina

**Integrated General Reevaluation Report and  
Environmental Impact Statement for Brunswick  
County Beaches, North Carolina**

**DRAFT PEER REVIEW PLAN**

August 2007



**US Army Corps  
of Engineers**

**Wilmington District**

## **ACRONYMS & ABBREVIATIONS**

**AFB** – Alternative Formulation Briefing

**CESAW** – US Army Corps of Engineers, South Atlantic, Wilmington

**CWRB** – Civil Works Review Board

**EIS** – Environmental Impact Statement

**EPR** – External Peer Review

**FCSA** – Feasibility Cost Sharing Agreement

**FEIS** – Final Environmental Impact Statement

**FSM** – Feasibility Scoping Meeting

**GRR** – General Reevaluation Report

**HQ** – Headquarters

**ITR** – Independent Technical Review

**LOI** – Letter of Intent

**NEPA** – National Environmental Policy Act

**OVEST** -- Office of the Chief of Engineers Value Engineering Study Team

**PCX-CSDR** - National Planning Center of Expertise for Coastal Storm Damage  
Reduction

**PDT** – Project Delivery Team

**PMP** – Project Management Plan

**PRP** - Peer Review Plan

**P&S** – Plans & Specifications

**SAD** – South Atlantic Division

**Walla Walla Dx** - Walla Walla District Directorate of Expertise for Civil Works  
Cost Engineering

## 1.0 The Peer Review Plan

This Peer Review Plan (PRP) is a collaborative product of the project delivery team (PDT) and the National Planning Center of Expertise for Coastal Storm Damage Reduction (PCX-CSDR) and the Walla Walla District Directorate of Expertise for Civil Works Cost Engineering (Walla Walla Dx). The PCX-CSDR and Walla Walla Dx shall manage the PRP, which for this study includes Independent Technical Review (ITR) only. External ITR is not deemed necessary for the initial review phase. Each of the following paragraphs (a. through j.) correspond to the guidance provided in paragraphs 6.a. through j. of Engineering Circular 1105-2-408, Planning - Peer Review of Decision Documents, 31 MAY 2005.

**a. Decision Document and Team Members.** The *Integrated General Reevaluation Report and Environmental Impact Statement for Brunswick County Beaches, NC* shall be the decision document. The Brunswick County Beaches General Reevaluation is being pursued under the Corps of Engineers' Construction General (CG) Program. The project was authorized by the Flood Control Act of 1966 (PL 89-789), which states:

The project for hurricane-flood control protection from Cape Fear to the North Carolina-South Carolina State line, North Carolina, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 511, Eighty-ninth Congress, at an estimated cost of \$12,310,000.

This General Reevaluation is being made in response to letter requests from the Town of Long Beach (July 13, 1994), Town of Yaupon Beach (July 18, 1994), Town of Caswell Beach (July 28, 1994), and the Town of Holden Beach (September 6, 1994).

The study area focus is the communities located on the two barrier islands known as Oak Island and Holden Beach. Oak Island, which is 13 miles long, is occupied by the Towns of Oak Island (formerly Long Beach and Yaupon Beach) and Caswell Beach. West of Oak Island is the island of Holden Beach, which is 11 miles long and occupied by the town of the same name. Due to the east-west orientation of the coastline, both islands face the Atlantic Ocean on the south. Other waterbodies in the vicinity include the Cape Fear River to the east, Shallotte Inlet to the west, and the Atlantic Intracoastal Waterway (AIWW) to the north. The two islands are separated by Lockwoods Folly Inlet. The study area also includes offshore borrow areas lying 1 to 8 miles from the shoreline and borrow areas in Jaybird Shoals, Lockwood Folly Inlet and Shallotte Inlet.

The other communities for which improvements were authorized in the Brunswick County Beaches project are not included in this GRR. The authorized shore protection improvements for Ocean Isle Beach have been reevaluated, approved, and constructed. The Sunset Beach portion of the Brunswick County Beaches project remains inactive, and there has been no request for a restudy.

The Brunswick County Beaches General Reevaluation is investigating measures and plans for hurricane and storm damage reduction. The study is also documenting incidental recreation benefits. Being located between Cape Romaine and Cape Fear, Brunswick County is a frequent target for hurricanes and tropical storms tracking along the mid-Atlantic coast. In addition to these direct landfalling storms, many storms that have passed offshore without making landfall have also impacted the study area. Local

impacts to the study area varied depending on the landfall location and strength of the storm.

Typical solutions considered for this study area are berm and dune beachfills using material dredged from offshore borrow sites, and in some cases building relocations, or coastal structures such as groins or breakwaters.

The estimated range of initial construction cost for the various alternatives varies between \$40 million and \$80 million, and estimated annual renourishment costs are approximately \$5 million. Renourishment would continue through 50 years if the project is authorized.

Key PDT members are shown in the table below.

ROLE	NAME	ORGANIZATION
Project Manager		
Program Manager		
Lead Planner		
Biologist		
Biologist		
Cultural Resources		
Coastal/H&H		
Geotechnical		
Cost Engineering		
Economics		
Economics		
Real Estate		

For more information regarding the PRP, the project manager for the feasibility study may be contacted as follows:

US Army Corps of Engineers – Wilmington District

#### **Independent Technical Review Team Leaders**

National Planning Center of Expertise for Coastal Storm Damage Reduction PCX-CSDR  
US Army Corps of Engineers – North Atlantic Division

US Army Corps of Engineers – Philadelphia District

Walla Walla District Directorate of Expertise for Civil Works Cost Engineering

**b. External Peer Review.** EC 1105-2-408 provides the process for deciding whether or not to employ external peer review. The following is an excerpt of EC section 9.a: *Decision documents covered by this Circular will undergo EPR if there is a vertical team consensus (involving district, major subordinate command and Headquarters members) that the covered subject matter (including data, use of models, assumptions, and other scientific and engineering information) is novel, is controversial, is precedent setting, has significant interagency interest, or has significant economic, environmental and social effects to the nation. Decision documents covered by this Circular that do not meet the standard shall undergo ITR as described in paragraph 8, above.*

Please see the External Peer Review Decision Checklist below (1 - 5).\*

1. Novel subject matter? No, this is a typical shore protection project.
2. Controversial subject matter? No, this is a typical shore protection project.
3. Precedent setting? No, this is a typical shore protection project.
4. Unusually significant interagency interest? No, this is a typical shore protection project.
5. Unusually significant economic, environmental, and social effects to the nation? No, the anticipated costs and effects are not unusual. Estimated construction costs will exceed the \$50 million trigger amount suggested for recommendation of an EPR.

**Decision:** The PDT suggests that External Peer Review is recommended for some aspects of the decision document – costs and economics, based on the project cost. For all other aspects of the decision document Independent Technical Review by a US Army Corps of Engineers team external to the project district, CESAW, will be sufficient to comply with the spirit of EC 1105-2-408, Planning - Peer Review of Decision Documents, dated 31 May 2005. It is not anticipated that any new methodologies will be used in the analysis and preparation of the Integrated Feasibility Report/EIS, nor that any of the data collected or analyzed would be considered influential scientific data.

**c. Anticipated Peer Review Schedule.**

REVIEW PHASE	COMPLETION DATE	
<b>Independent Technical Review AFB Materials</b>	<b>Summer</b>	<b>2008</b>
Alternative Formulation Briefing (AFB)	Fall	2008
<b>ITR and EPR, for Draft GRR &amp; EIS</b>	<b>Spring</b>	<b>2009</b>
Draft GRR & EIS / NEPA Public Review	Summer	2009
Civil Works Review Board	Winter	2010
Final EIS / NEPA Public Review (MSC Commanders Public Notice)	Spring	2010

**d. Conducting External Peer Review.** The relevant Planning Center(s) of Expertise will make the final determination as to whether or not External Peer Review is to be conducted. For this feasibility study, this decision is the responsibility of the PCX-CSDR and the Walla Walla Dx.

**e. Public Comment on Decision Document.** Once completed, the Integrated General Reevaluation Report/EIS will be disseminated to resource agencies, interest groups, and the public as part of the National Environmental Policy Act (NEPA) environmental compliance review. Please note where “FEIS / NEPA Public Review” is highlighted in the “Peer Review Plan” flow chart included as Attachment 1. Public entities and private individuals may also review and comment on draft documents as members of the PDT.

**f. Provision of Public Comments to Reviewers.** All significant and relevant public comments will be provided as part of the review package to Peer Reviewers as they are available and may include but not be limited to: scoping letters, meeting minutes, other received letters, and emails.

**g. Anticipated Number of Reviewers.\*\*** The relevant Planning Center(s) of Expertise shall make the final determination for the number needed of reviewers. For this feasibility study, this decision is the responsibility of the PCX-CSDR and the Walla Walla Dx.

**h. Primary Review Disciplines and Expertise.** The number of reviewers (Level of Review) shall vary as depicted under “Review Phase” in the “Peer Review Plan” flow chart included as Attachment 1. The PCX-CSDR and the Walla Walla Dx shall make the final determination for the discipline type and number needed of reviewers depending upon the “Review Phase.” The minimal number of discipline types expected is 9 as,

shown in the following table. As the Brunswick County Beaches GRR proceeds, additional reviewing disciplines may be added.

PRELIMINARY REVIEW DISCIPLINES FOR ITR/EPR
Planning
Environmental / NEPA Compliance
Cultural Resources
Economics
Recreation
Coastal Engineering / Hydrology & Hydraulics
Geotechnical Engineering
Cost Estimating
Real Estate

**i. Selection of External Peer Reviewers.** The relevant Planning Center(s) of Expertise and associated Vertical Team shall make the final determination for the discipline type and number needed of reviewers as well as which if any External Peer Reviewers are needed. For this feasibility study, this decision is the responsibility of the PCX-CSDR and the Walla Walla Dx.

**j. Nomination of Peer Reviewers by the Public.** The PCX-CSDR and the Walla Walla Dx shall determine if Peer Reviewers will be nominated by the Public. The public will have opportunities to review the Integrated Feasibility Report/EIS as required by the NEPA compliance process.

**k. Miscellaneous Items.**

**i. DrChecks.** DrChecks will be used to conduct the ITR.

**ii. Model Certification.** All models developed or modified during for use in this study will be subjected to ITR and will be certified as required by Engineer Circular (EC) 1105-2-407, U.S. Army Corps of Engineers. *Planning Models Improvement Program: Model Certification.*

\*\* See Attachment 2

**ATTACHMENT 1**

**PEER REVIEW PLAN**



PEER REVIEW PLAN	
FEASIBILITY PHASE	
Study Product or Milestone	Review by
Feasibility Scoping Meeting	( not part of this study)
Value Engineering Package	OVEST PDT
Alternative Formulation Briefing	PDT, Supervisors, ITR Team
Draft GRR & EIS Risk Analysis Cost Engineering Policy	PDT, Supervisors, ITR Team, OC Walla Walla Dx Walla Walla Dx HQ, SAD
CWRB Review Package	PDT, Supervisors
Final GRR & EIS	CWRB
Chief of Engineers Report	HQ→ ASA(CW)→ OMB→ Congress

\* Reference External Peer Review Decision Checklist in Section b., questions 1 - 5: if any changes occur in checklisted items, the vertical team will determine if External Peer Review (EPR) will be required. A decision regarding EPR is requested in writing from SAD and HQ Regional Integration Team Leader (RIT).

\*\*A Scoping Letter during the Reconnaissance Phase provides the Public the opportunity to share any known concerns.

\*\*\*The Project Delivery Team (PDT) includes the non-Federal Sponsor, stakeholders, and resource agencies.

**ATTACHMENT 2**

**ITR APPROVAL REQUEST**

Establishment of ITR responsibility has been an evolving process. Skilled and experienced personnel who have not been associated with the development of the Brunswick County Beaches GRR products have been previously requested by Wilmington District Plan Formulation and Economics. It is requested that these ITR Team Members be evaluated and approved to perform the upcoming ITR for the Draft Feasibility Report and EIS. Below are the biographies for the ITR Team Members.

EPR members will be determined by the PCX-CSDR and the Walla Walla Dx.

Key ITR members are shown in the table below.

ROLE	NAME	ORGANIZATION
Planning / Plan Formulation		CENAP-
Environmental		CENAP-
Cultural Resources		CENAP-
Coastal/H&H		CENAP-
Geotechnical		CENAP-
Cost Engineering		CENAP-
Economics		CENAP-
Recreation		CESWT
Real Estate		CENAB-

Below are the biographies for the anticipated ITR Team Members.

**Plan Formulation / Planning**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX

**Environmental**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX

**Economics**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX

**Cost Estimating**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX

## **Coastal Engineering / Hydrology & Hydraulics**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX

## **Geotechnical Engineering**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX

## **Real Estate**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX

## **Recreation**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX

## **Cultural Resources**

**Name:** --

**Grade and position title:** GS-XX, XXIST

**Organization:** XX District, XX Division (CEXXX)

**Education:** XX

**Years of experience:** XX

**Major achievements and projects:** XX

**Other awards and relevant accomplishments:** XX

**Professional Memberships:** XX

**Training:** XX